ConocoPhillips

March 12, 2010

RE: Connecticut Heating Oil Legislation (SB382)

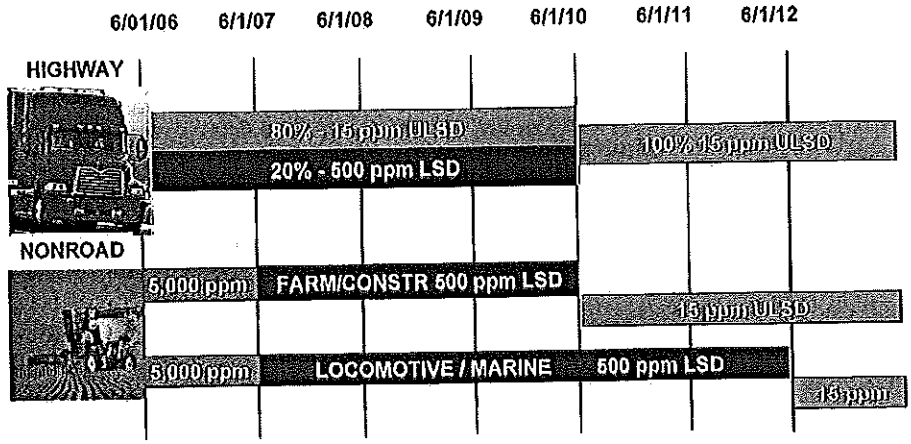
On behalf of ConocoPhillips, I would like to express strong opposition to proposed legislation that reduces the sulfur content of home heating oil to *ultra-low* levels in less than one and a half years. SB382 calls for all home heating oil sold in Connecticut to not exceed 50 parts-per-million sulfur (50 ppm) by July 2011 and 15 parts-per-million sulfur (15 ppm) by July 2014.

ConocoPhillips supports the removal of sulfur from heating oil, but we respectfully request that you consider a different approach that would provide adequate time for large refining investments to be made and to ensure plentiful supplies for Connecticut's heating oil consumers.

ConocoPhillips is one of the largest producers and suppliers of heating oil to the northeastern and mid-Atlantic states. ConocoPhillips owns and operates 12 refineries throughout the U.S.; five of our refineries have direct local access, pipeline access or waterborne access to the northeast region. While ConocoPhillips has invested billions of dollars to remove sulfur from fuels that are sold into the *transportation* and *off-road diesel* markets, very large investments are still needed to remove sulfur from *heating oil*.

Like ConocoPhillips, refining companies nationwide invested extraordinary sums of capital under EPA's diesel sulfur reduction program that is targeted at the *transportation* and *off-road diesel* markets, not the *heating oil* market (see chart below). Consequently, the refining industry still does not have enough equipment on the ground today to remove sulfur from heating oil supplies.

EPA Diesel Sulfur Regulation Timeline



Note: This timeline represents compliance at the refinery gate; terminal compliance dates are approximately 3 months later.

The significance of the EPA timeline is that refineries were provided with adequate advance notice to make major capital investments in distillate sulfur removal for the *transportation* and *off-road diesel* markets:

- EPA adopted the Heavy Duty Highway Diesel rule in June 2001 giving refiners **5 years to invest** in deeper desulfurization capacity before the first drop of **15 ppm** sulfur on-road diesel production was required on June 1, 2006 (refer to Highway bars on the chart above).
- EPA adopted the Nonroad Diesel Engines and Fuels rule in June 2004 giving refiners **3 years to invest** in more desulfurization capacity to produce **500 ppm** sulfur non-road diesel for the agricultural, construction, railroad and marine markets on June 1, 2007; refineries were allowed **4 more years** to bring sulfur down to **15 ppm** for the *agricultural/construction* sector by June 1, 2010 and then **another 2 years** to bring sulfur down to **15 ppm** for the *railroad/marine* sectors by June 1, 2012 (refer to Nonroad bars on the chart above).

In our view, the EPA program has been very successful because of this meticulously planned timeline. Refineries had the lead time necessary to make investments that has prevented supply shortfalls and even short-term supply disruptions. Consumers are unaware of the dramatic changes occurring in *transportation* and *off-road diesel* quality because the transition has been implemented flawlessly. We seek the same outcome for *heating oil* consumers.

When considering further sulfur reductions for heating oil, we urge law-makers to be mindful of the advance lead time needed to make refining investments. It takes at least 4 years to complete a major heating oil sulfur reduction project from start to finish – there are no shortcuts to this process! Here are the primary activities that must be undertaken for such large-scale investments:

- Completing corporate capital planning and project financing
- Securing an engineering contractor to finalize the project design, manage the equipment procurement schedule, ensure quality control and timely production of equipment, and oversee construction
- Obtaining numerous federal and state environmental permits for construction and operation
- Bidding, ordering and fabricating long-lead time equipment, such as high-pressure reactors and compressors
- Completing on-site construction to install new equipment and integrate the process into existing refinery infrastructure
- Training operators and starting up a new process unit

ConocoPhillips fully supports the petroleum industry's view that the better solution to remove sulfur in heating oil and guard against supply shortfalls is to harmonize the entire northeastern region at 500 ppm sulfur by July 2014. We also urge the States to carefully consider the supply, cost and environmental implications of sulfur reductions below 500 ppm for the following reasons:

- **The reduction in heating oil sulfur content from current levels of 2000-2500 ppm down to 500 ppm will reduce SO_2 emissions by 75-80%.**
- **There is no known environmental justification for reducing heating oil sulfur levels below 500 ppm** A Brookhaven National Laboratory study – Low Sulfur Home Heating Oil Demonstration Project – concluded that "when all air emissions are included, low sulfur content [500 ppm] home heating oil and utility natural gas are virtually equal in their environmental impacts" (Source: BNL-74956-2005-IR summary report at www.bnl.gov/isd/documents/30441.pdf).
- **A reduction down to 15 ppm, as Connecticut is proposing, would place heating oil in direct competition for supply from the transportation and off-road diesel market.** Distillate consumption is expected to return to strong growth levels as global economies emerge from the recent recession. As the supply-demand balance tightens, the market price for all distillates is expected to increase – extra demand for ultra-low sulfur product for *heating oil* market would exacerbate this market response.
- **ConocoPhillips is not aware of any heating oil equipment (including condensing boilers, high-efficiency burners or emission control systems) that requires a 15 ppm sulfur fuel to achieve the manufacturer's efficiency claims.** The EPA's ultra-low sulfur diesel fuel standard (15 ppm) for transportation and off-road diesel exists to enable the use of advanced technologies to reduce diesel engine emissions. There is no comparable technological driver for a 15 ppm *heating oil* sulfur standard.

- **A 15 ppm standard would significantly reduce product handling flexibility in the supply and distribution system.**
  In contrast, a 500 ppm standard allows for efficient disposition of the jet fuel/diesel fuel interface that occurs from sequential pipeline movements of these products. As a result, this interface volume which bolsters heating oil supplies today would be lost at a 15 ppm standard and would have to be reprocessed at refineries. The interface cannot be blended into jet fuel supplies due to other limiting specifications that are critical to aircraft engines.
- **A 15 ppm standard would significantly reduce refinery operating flexibility during scheduled maintenance operating conditions.**
  Due to decades of technological advances, refineries operate very efficiently. However, operational and equipment updates, along with planned preventive maintenance, is unavoidable. In such situations, a refinery's only alternative may be to reduce throughput or shut down portions of the refinery to avoid exceeding this severely low 15 ppm sulfur standard. Having a 500 ppm sulfur standard for heating oil will alleviate the larger impacts on other refinery products, including loss of gasoline, jet fuel and transportation diesel output, while bolstering heating oil supplies.

We request an opportunity to work with you to enact legislation that will reduce heating oil sulfur levels, provide refineries with the lead time needed to make investments and ensure that a fuel so vital to consumers is not at risk of supply shortages.

Sincerely,

L. M. Zlemba
President
ConocoPhillips Global Refining